

UK Patent Application ₍₁₉₎ GB ₍₁₁₎ 2 183 461 ₍₁₃₎ A

(43) Application published 10 Jun 1987

(21) Application No 8628827

(22) Date of filing 2 Dec 1986

(30) Priority data

(31) 60/184463 (32) 2 Dec 1985 (33) JP
60/195282 20 Dec 1985

(51) INT CL⁴
A47L 25/00

(52) Domestic classification (Edition I)
A4F EX FB126
A4K FX
U1S 1845 1854 A4F A4K

(56) Documents cited

GB	1303753	GB	1041178
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GB	1098454	GB	0886898
GB	1068413		

(58) Field of search

A4F
A4K
B8T
Selected US specifications from IPC sub-class A47L

(71) Applicant

Willson Company Limited

(Incorporated in Japan),

6-13 Saginomiya 1-chome, Nakano-ku, Tokyo 165,
Japan

(72) Inventor

Takashi Imoto

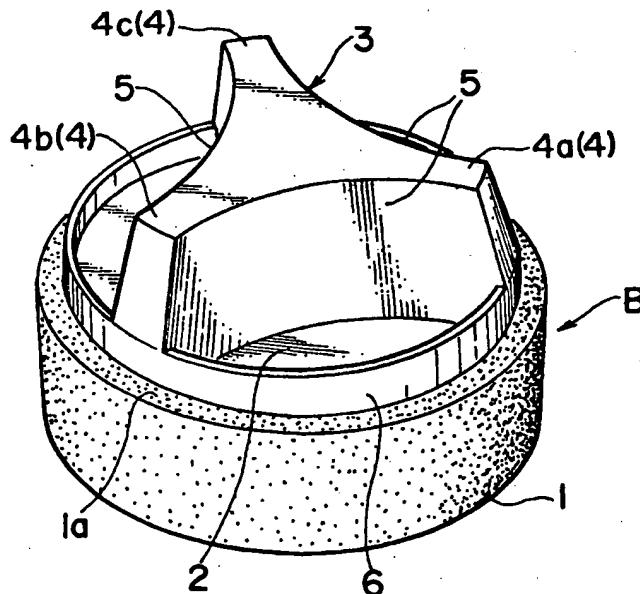
(74) Agent and/or Address for Service

Frank B. Dehn & Co., Imperial House, 15-19 Kingsway,
London WC2B 6UZ

(54) Wax applicator

(57) A wax applicator for applying wax to the surfaces of vehicle bodies and tyres comprises a spongy pad 1 having a handle 3 with a base member 2 located therebetween so as to prevent any wax on the pad from soiling the user's hand. The handle may be integrally moulded with the base member, or it may be fastened thereto. The pad may be made from polyurethane foam. The base member may be provided with an upstanding peripheral flange 6 and/or a downwardly extending peripheral flange. The applicator may form part of a kit including a wax container and cup-like cover in which it is housed.

FIG. 1



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-2 DEC. 86- 28827

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FIG.1

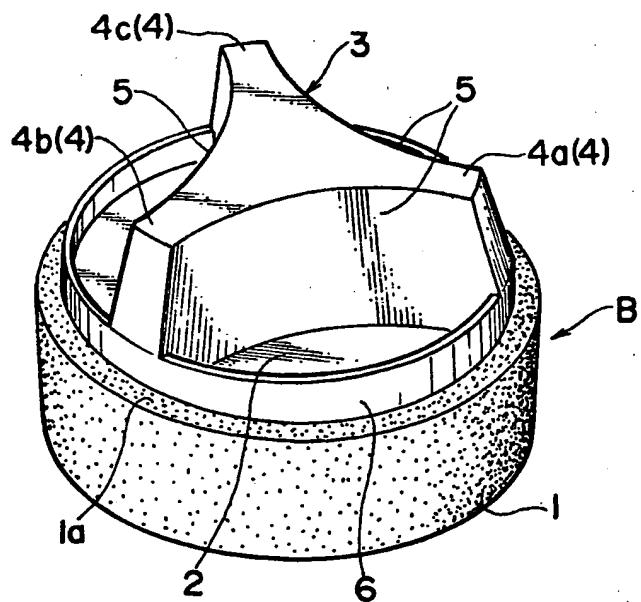
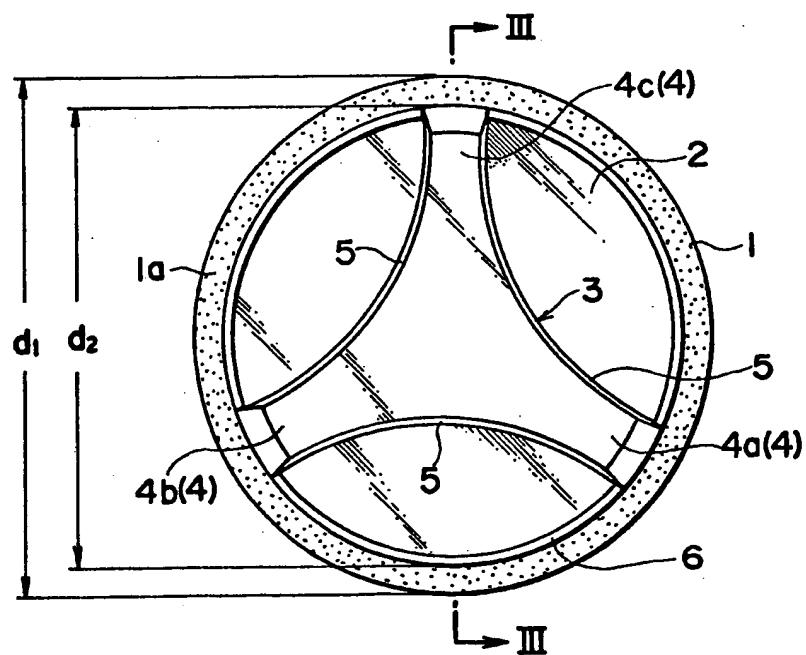


FIG.2



-2 DEC. 86- 28827

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FIG.3

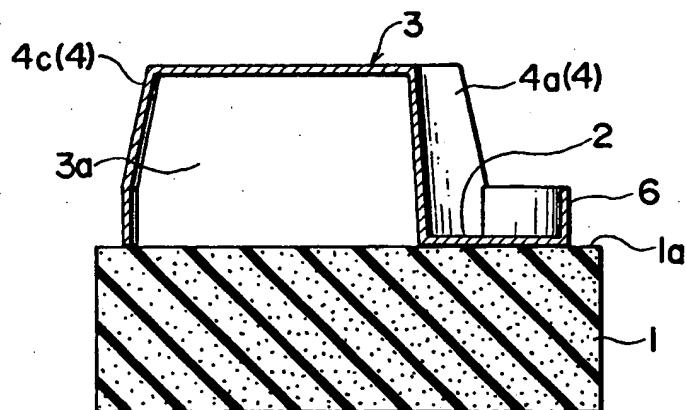


FIG.4

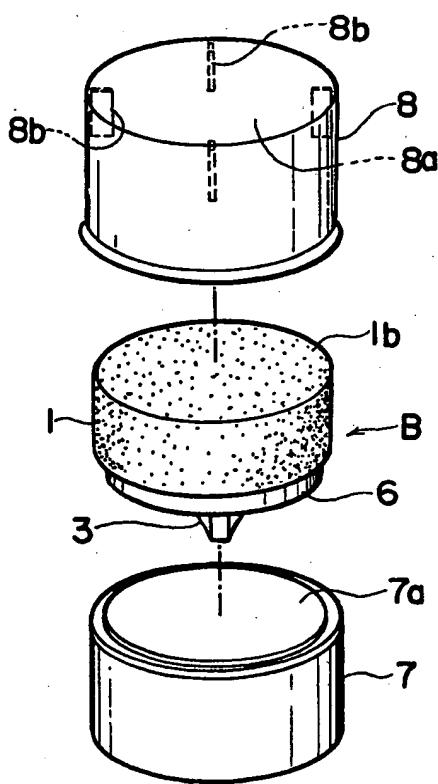
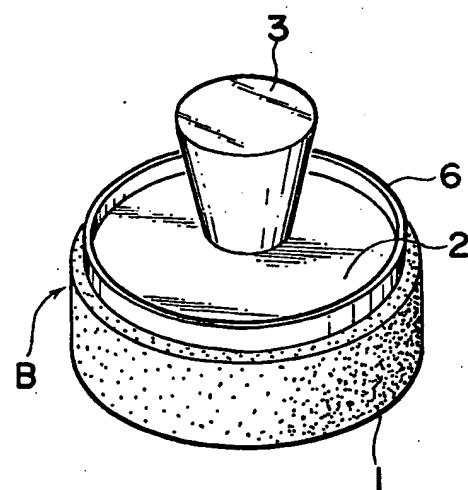


FIG.5



2 DEC 86- 28827

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FIG. 6

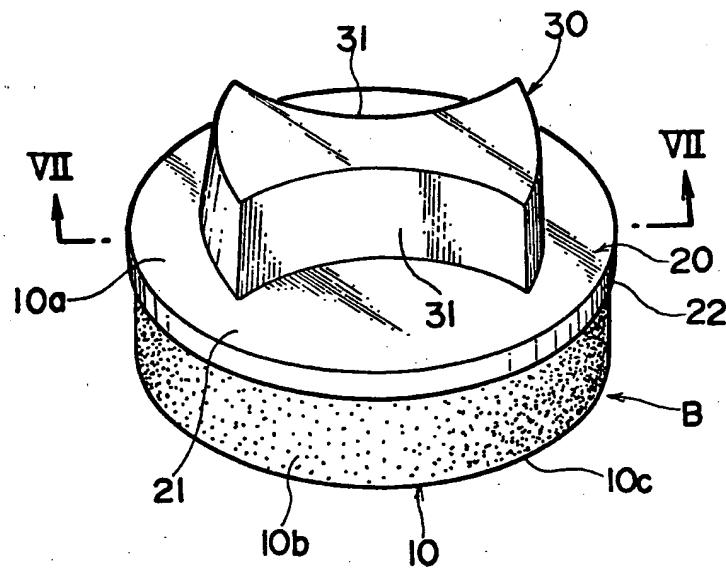


FIG. 7

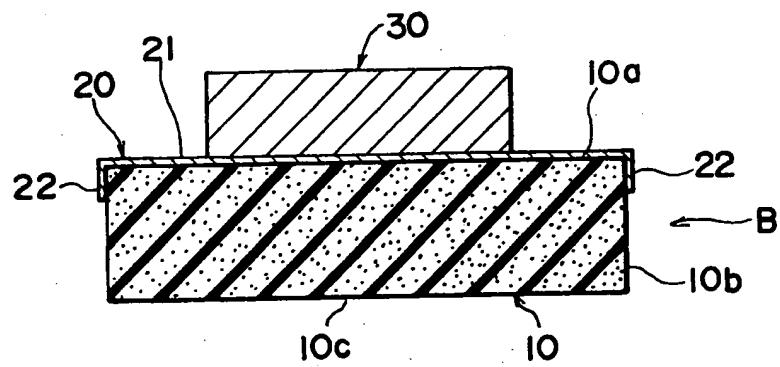


FIG.8

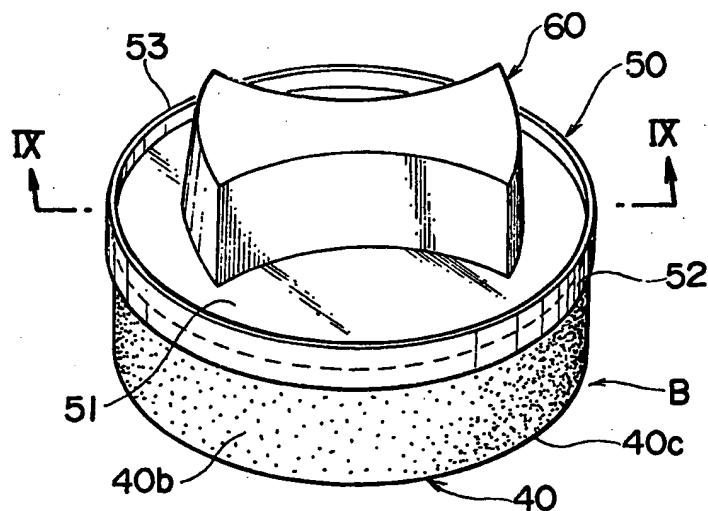


FIG.9

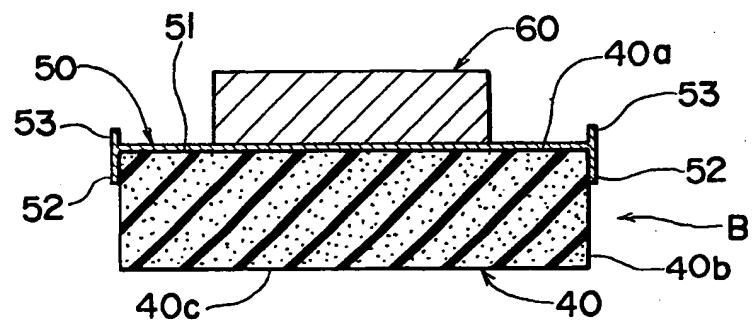
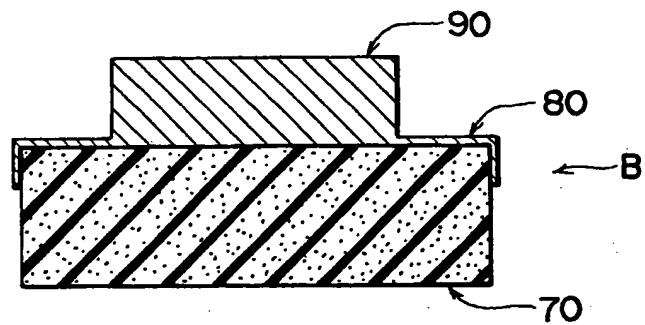


FIG.10



SPECIFICATION
Device for Application of Wax

This invention relates to a waxing device to be used, for example, for applying wax to the surfaces of vehicles bodies and tires.

Heretofore a device formed simply as a spongy pad has been generally used as a waxing device. The simple device of this type is such that no

particular surface thereof is used exclusively for the application of wax. When a worker takes this device in his hand there is a fair possibility of the worker's hand being smeared with the wax adhering to the surfaces of the pad. This causes the problem that once such residual wax enters behind the worker's fingernails it is difficult to remove the entrapped wax from the nails.

For the solution of this problem, it has already been proposed to secure the spongy pad to a handle member, thus enabling the worker to carry out wax application by holding the device by the handle member thereof. In this case, since the worker is not required to touch the pad directly, the possibility that the wax on the pad will smear the worker's hands is reduced.

However, since the said pad is generally elastic and capable of changing shape, there is still the possibility that when the pad is heavily deformed during the operation of wax application, the fingers of the hand holding the handle member will slip off and come into direct contact with the waxy surface of the pad or with the surface being waxed, and thus smearing of the worker's hand with wax can still occur.

Further, when the aforementioned waxing device has been used for a long time, since the wax gradually permeates through the pad, there is the possibility that the wax will eventually exude from the top of the pad. In this case there is the possibility that the wax so exuding will adhere to the fingers of the worker's hand holding the handle member, and thus again the worker's hand may be smeared with wax.

According to the present invention there is provided a waxing device, comprising a spongy pad adapted to permit adhesion of wax thereto, a handle member upstanding from the top of said pad, and a base member interposed between said pad and said handle member and arranged to prevent wax adhering to said pad from passing to said handle member.

The material of the pad of such a device may be selected from any suitable spongy substances which are capable of permitting the required deposition of wax. Of course, the shape, size, elasticity, and other similar properties of this material can be suitably chosen to suit particular circumstances.

The said handle member may be integrally molded with the said base member, or may be molded independently and fastened to the top of the base member. As concerns the specific construction of the handle member, it is only required that it should protrude from the top of the base member to a sufficient extent to be grippable by a worker's

hand. The lateral cross-sectional shape of the handle member may, therefore, be a simple rectangle, a circle, a triangle, or a cruciform shape, for example. Optionally, the lateral cross-sectional

shape of the handle member may be different at its base and at its top.

The base member may be of a size approximately conforming with the top surface of the pad. It should be suitably arranged so it fulfills the requirement of

preventing wax adhering to the pad from passing to the handle member. More specifically, the base member may be provided with an upstanding flange arranged to encircle the handle member and thus to prevent a worker's fingers from slipping off the edge of the base member. It may be formed of a material impermeable to wax, so that even after the brush has been in use for a long time, any wax which has seeped through the pad will be prevented from passing to the handle member.

In order to protect the surface being waxed against possible damage, the base member may be fixed in a position inwardly of the circumferential edge of the top side of the pad. Alternatively, to enhance the sealing effect of the base member with no substantial sacrifice of the surface area of the pad available for wax application, a downwardly extended flange may be provided around the periphery of the base member to cover the upper edge of the pad. Then, to protect the surface being

waxed against damage, the base member may be formed as a thin sheet of an elastic material, such as for example polyethylene resin, which is impermeable to wax.

Thus, since the pad is connected to the handle member by way of the base member, the possibility of the worker's hand coming directly into contact with the pad is eliminated, so long as the worker keeps firm hold of the handle member.

Further, since the base member is arranged to prevent the wax adhering to the pad from passing to the handle member, the possibility of a worker's hand holding the handle member being smeared with wax is substantially removed.

Where the base member is provided with an upstanding flange encircling the handle member, even if the worker's fingers accidentally slip off the handle member during wax application, his fingers will collide against the flange and thus be prevented from slipping further. Thus, the possibility of the worker's fingers coming into contact with the pad or with the surface being waxed is effectively eliminated.

Where the base member is made of a material impermeable to wax and covers the top of the pad, the possibility of wax which has seeped into the pad exuding from the top of the pad is also eliminated.

Some embodiments of the invention will now be described by way of example and with reference to the accompanying drawings, in which:

Figure 1 is a perspective view of a waxing device according to a first embodiment of the present invention;

Figure 2 is a plan view of the waxing device of Figure 1;

Figure 3 is a cross-section taken along the line

III—III of Figure 2;

Figure 4 illustrates a container for the waxing device of the first embodiment;

Figure 5 is a perspective view of a modification of 5 the handle member of the first embodiment;

Figure 6 is a perspective view of a waxing device according to a second embodiment;

Figure 7 is a cross-section taken along the line VII—VII of Figure 6;

10 Figure 8 is a perspective view of a third embodiment;

Figure 9 is a cross-section taken along the line IX—IX of Figure 8; and

15 Figure 10 is a cross-section of a fourth embodiment of the invention.

Figures 1 to 3 depict a waxing device for waxing the surface of, for example, an automobile body. The waxing device B comprises a waxing pad 1 formed in the shape of a cylinder from a spongy 20 material such as foamed polyurethane, a disk-like base member 2 fixed to the top surface 1a of the pad 1, and a handle member 3 upstanding from the base member 2.

In this embodiment the outside diameter d_1 of the 25 pad 1 is larger than the outside diameter d_2 of the base member 2. Thus, the base member 2 is disposed within the top surface 1a of the pad 1, inwardly of the peripheral edge thereof.

The base member 2 and the handle member 3 are 30 integrally molded of synthetic resin, for example, by means of a die. The handle member 3 has a hollow part 3a therein, and is formed in the shape of a triangular column. The three outwardly extending parts 4 (more specifically, 4a through 4c) are 35 interconnected by smoothly curved concave faces 5. The outer ends of the parts 4 are formed so as to merge with the adjacent peripheral portions of the base member 2.

Around the circumference of the base member 2 40 an upstanding flange 6 is formed so as to encircle the handle member 3, the outer ends of the parts 4 of the handle member merging into the surface of the flange 6.

To use the waxing device of this embodiment, a 45 worker has only to spread wax on the pad 1, then take hold of the handle member 3 and pass the pad 1 over the surface of an automobile body, for example, to effect the application of wax. In doing so, the wax which is spread on the pad 1 cannot 50 come into direct contact with the worker's hand and the possibility of the worker's hand being smeared with wax is thus eliminated.

If the pad 1 becomes heavily deformed because of its elasticity, and the fingers of the worker's hand 55 holding the handle member 3 slip off during the course of wax application, the fingers may continue their outward motion on the base member 2. However, the fingers will then collide with the flange 6 and thus be prevented from continuing their 60 outward motion. Thus the possibility of the fingers moving further in the direction of the pad 1, or towards the surface of an automobile body being waxed, is effectively eliminated. As the result, the possibility of the worker's hand being smeared with 65 the wax adhering to the pad 1 is avoided. Also, the

possibility of the fingers of the worker's hand accidentally colliding with the surface being waxed and inflicting damage thereon is substantially removed.

70 Moreover, since the base member 2 is disposed on the top surface 1a of the pad 1 inwardly of the peripheral edge thereof, the peripheral edge of the base member 2 cannot easily come into contact with the surface of an automobile body being waxed, 75 even if the pad 1 is heavily elastically deformed. This fact adds all the more to the protection of the surface being waxed against the infliction of damage.

As shown in Figure 4, a cup-like cover 8 may be 80 detachably mounted on the top of a container 7 for wax, and this cover 8 may be adapted to accommodate therein the waxing device B of Figures 1 to 3. Thus the wax container 7 and the waxing device B can be provided as a complete 85 waxing and cleaning set. If, as is preferred, the cover 8 is adapted so that the waxing surface 1b of the pad 1 will contact the inner top surface 8a of the cover 8, the waxing surface of the pad will not then be able to come into contact with the lid 7a of the wax

90 container 7, and thus the possibility of wax on the pad 1 smearing the lid 7a of the wax container 7 is eliminated. As the result, the possibility of the worker's hand being smeared with wax when he opens the lid 7a of the wax container is avoided. In 95 Figure 4 the reference numerals 8b denote retainer pieces protruding from the inner wall surface of the cover for the purpose of retaining the waxing device B in position.

As a modification of the handle member 3 of the 100 first embodiment, the handle member may take the shape of an inverted truncated cone upstanding from the central part of the base member 2, as shown in Figure 5. Then, since the diameter of the handle member 3 is smaller at its base than at its 105 outer end, the possibility of the worker's hand slipping off the handle member 3 during the course of wax application is avoided.

Figures 6 and 7 show a second embodiment of a 110 waxing device according to the invention. Similarly to the first embodiment, the waxing device B of this embodiment comprises a cylindrically formed pad 10 made of a spongy material such as foamed polyurethane, a handle member 30 upstanding from the top 10a of the pad 10, and a base member 20 115 interposed between the pad 10 and the handle member 30.

In this embodiment the base member 20 is molded in the form of a sheet using an elastic material, such as for example polyethylene resin, 120 which is impermeable to wax. It comprises a base part 21 covering the entire top 10a of the pad 10, and a downward flange 22 covering the upper region of a circumferential wall 10b of the pad and fixed to the pad with adhesive. The handle member 30 is formed 125 of a suitable synthetic resin material, in a substantially oblong shape. On the opposite sides of the handle member 30 inwardly curved walls 31 are formed, to provide surfaces suitable for gripping by a worker's hand. The handle member 30 is fixed to 130 the base member 20 with adhesive.

With the waxing device of this second embodiment, wax application is carried out in much the same manner as in the first embodiment. Wax which is spread on the waxing surface 10c of the pad 10 is generally capable of permeating the pad. However, since the top 10a of the pad and the upper region of the peripheral wall thereof are covered by the base member 20, which is made of an elastic sealing material, it is not possible for wax which has permeated into the pad to exude from the surfaces of those parts. As the result, even if the fingers of a worker's hand holding the handle member 30 happen to come into contact with the part 21 of the base member 20, the possibility of the worker's fingers being smeared with wax is effectively avoided.

Also, since the base member 20 is formed as a thin sheet, the overall depth of the waxing brush is not substantially increased by the interposition of the base member between the pad 10 and the handle member 30. Besides, as the base member 20 is provided with the flange 22, the area in which the wax can exude from the surface of the pad 10 is decreased and the possibility of the worker's hand being smeared with wax is thus reduced. Further, since the portion of the pad 10 within the flange 22 retains its freedom for elastic deformation, the elastic function of the pad 10 is not impaired.

Optionally as in the embodiment illustrated in Figure 4, a cup-like cover 8 detachably mounted on the top of a wax container 7 may be adapted to accommodate the waxing device B of Figures 6 and 7. Thus, the waxing device B and the wax container 7 can be provided as a complete waxing and cleaning set.

Figures 8 and 9 show a third embodiment of the invention. Here the waxing device B is similar in its basic construction to that of the second embodiment, but the base member 50 differs in that it has an upstanding flange 53 in addition to a base part 51 and a downward flange 52. The flange 53 encircles the handle part 60.

The waxing device of this third embodiment has a manner of operation and an effect similar to that of the second embodiment. In use of the waxing device even if the worker's hand happens to slip off the handle member 60, his fingers are stopped by the flange 53 and are thus stopped from moving in the direction of the pad 40 or toward the surface

50 being waxed. Thus, the possibility of the worker's hand being smeared with wax is prevented even more effectively than by the second embodiment, and the possibility of the worker's fingers accidentally contacting the surface being waxed is 55 also eliminated.

Figure 10 shows a fourth embodiment, in which a handle member 90 and a base member 80 covering a pad 70 are integrally formed. In this embodiment, since the number of component parts and the 60 number of operational steps involved in the assembly of the waxing device are decreased, the cost of manufacturing the waxing device is proportionately decreased.

It is to be clearly understood that there are no 65 particular features of the foregoing specification, or of any claims appended hereto, which are at present regarded as being essential to the performance of the present invention, and that any one or more of such features or combinations thereof may 70 therefore be included in, added to, omitted from or deleted from any of such claims if and when amended during the prosecution of this application or in the filing or prosecution of any divisional application based thereon.

75 CLAIMS

1. A waxing device, comprising a spongy pad adapted to permit adhesion of wax thereto, a handle member upstanding from the top of said pad, and a 80 base member interposed between said pad and said handle member and arranged to prevent wax adhering to said pad from passing to said handle member.
2. A waxing device according to Claim 1, wherein 85 said base member is provided with an upstanding flange arranged to encircle said handle member.
3. A waxing device according to claim 1 or 2, wherein said base member is disposed on a portion of the top of said pad inwardly of the peripheral 90 edge thereof.
4. A waxing device according to any of claims 1 to 3, wherein said base member is made of a material impermeable to wax.
5. A waxing device according to Claim 4, wherein 95 said base member is made of an elastic material.
6. Waxing devices substantially as hereinbefore described with reference to the accompanying drawings.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 03/07398

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 A61K7/48

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAU

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 199 11 041 A (HENKEL KGAA) 14 September 2000 (2000-09-14) claims 1-3	1-25
X	US 4 127 515 A (MACRAE DAVID M ET AL) 28 November 1978 (1978-11-28) claims 1-12; examples 1-6	1-25
X	US 5 605 749 A (FOWLER JOHN W ET AL) 25 February 1997 (1997-02-25) the whole document	1-25
X	US 5 177 831 A (WIRTH DAVID L) 12 January 1993 (1993-01-12) the whole document	1-25
		-/-

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

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Date of the actual completion of the International search	Date of mailing of the International search report
9 December 2003	17/12/2003
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentbaan 2 NL - 2280 HV Rijswijk Tel: (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Yon, J-M

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International Application No

PCT/EP 03/07398

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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